

## CLAIMS

1. System for the transmission of message traffic in a packet-switched telecommunication system, said system comprising:

5 a network element (1), which comprises a cross-connection part (11) and a control part (12), said cross-connection part (11) comprising at least one unit computer ( $C_r$ ), and said control part (12) comprising at least one unit computer ( $C_k$ ), and

10 means (1) for the transmission of internal message traffic within the network element (1) between the unit computers ( $C_r$ ,  $C_k$ ),

characterized in that the system further comprises:

15 at least one unit computer ( $C_r$ ) in the cross-connection part (11) whose message traffic is transmitted by utilizing the universal cross-connections produced by the network element (1) itself, said unit computer ( $C_r$ ) of the cross-connection part (11) being  
20 disposed on a different plug-in unit than the nearest terminal point of the cross-connection it is using for message traffic.

2. System as defined in claim 1, characterized in that the system further comprises:

25 at least one unit computer ( $C_k$ ) in the control part (12) whose message traffic is transmitted by utilizing the universal cross-connections produced by the network element (1) itself.

3. System as defined in claim as defined in  
30 claim 1 or 2, characterized in that the telecommunication system has been implemented using ATM based components.

4. System as defined in claim 3, characterized in that the control part (22) further  
35 comprises:

a number of computer units (CU), each one of which comprises a SAR-PHY circuit pair (P/S) and a unit computer (C).

5        5. System as defined in claim 3 or 4, characterized in that the cross-connection part (21) further comprises:

a number of LIU units (LIU), each one of which comprises a unit computer (C), a SAR-PHY circuit pair (S/P), a PHY circuit (P) and an ATM circuit (A).

10        6. System as defined in any one of claims 3 - 5, characterized in that the cross-connection part (21) further comprises:

an ATM switching fabric (ASF), which comprises a unit computer (C), a SAR-PHY circuit pair (S/P) and an ATM circuit (A).

7. Method for the transmission of message traffic in a packet-switched telecommunication system, said method comprising the steps of:

20        transmitting internal message traffic within the network element between the unit computers of the cross-connection part and the unit computers of the control part of said element,

characterized in that the method further comprises the steps of:

25        transmitting the message traffic of at least one unit computer in the cross-connection part by:

establishing a universal cross-connection between the sending unit computer and the receiving unit computer,

30        transmitting the message traffic from the sending unit computer, said unit computer in question being disposed on a different plug-in unit than the nearest terminal point of the cross-connection it is using for the message traffic,

35        transmitting the message traffic to the receiving unit computer, and

disconnecting the cross-connection.

8. Method as defined in claim 7, characterized in that the method further comprises the step of:

transmitting the message traffic of at least  
5 one unit computer of the control part by utilizing the universal cross-connections produced by the network element itself.

9. Method as defined in claim 7 or 8, characterized in that the method further  
10 comprises the step of:

distributing the functions of the control part among the plug-in units of the cross-connection part.

10. Method as defined in any one of claims 7  
15 - 9, characterized in that the method further comprises the step of:

transmitting message traffic in an ATM telecommunication system.